

Listing of Claims

1-33. (Cancelled).

1 34. (Original) A method for enabling vaccination of a patient against infectious diseases,
2 comprising the steps of:

3 a) treating hookworm infection to a degree sufficient to increase lymphocyte
4 proliferation; and
5 b) vaccinating said patient against said infectious disease.

1 35. (Original) The method of claim 34 wherein said infectious disease is selected from the group
2 consisting of HIV, tuberculosis, malaria, measles, tetanus, diphtheria, pertussis, and polio.

1 36. (Original) A method for enabling hookworm vaccination, comprising the steps of:
2 a) chemically treating a hookworm infected patient to ameliorate hookworm infection;
3 and
4 b) vaccinating said patient with a recombinant or synthetic antigen or fragment thereof
5 derived from hookworm after amelioration of hookworm infection.

37-97. (Cancelled)

1 98. (New) A composition comprising:
2 a cocktail of recombinant or synthetic antigens derived from hookworm, and,
3 a pharmacologically acceptable carrier.

1 99. (New) The composition of claim 98, wherein said composition comprises at least one larval
2 stage antigen and at least one adult stage antigen.

1 100. (New) The composition of claim 98, wherein said antigen is ASP-1, ASP-2, MTP-1, 103
2 (SAA), 16, GST or an antigen having at least 80% homology therewith.

1 101. (New) The composition of claim 98, wherein said antigen is selected from the group
2 consisting of GST, CP-2, APR-1, APR-2, MEP-1, TMP or an antigen having at least 80%
3 homology therewith.

1 102. (New) The composition of claim 98, wherein a species of said hookworm is selected from
2 the group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*,
3 and *Ancylostoma duodenale*.

1 103. (New) A method of vaccinating or eliciting an immune response to hookworm in a
2 mammal, comprising the step of,
3 administering to said mammal an effective amount of a composition comprising
4 a recombinant or synthetic antigen derived from hookworm, and
5 a pharmacologically acceptable carrier.

1 104. (New) The method of claim 103 wherein said composition includes
2 a cocktail of recombinant or synthetic antigens derived from hookworm, and,
3 a pharmacologically acceptable carrier.

1 105. (New) The method of claim 103, wherein said composition comprises at least one larval
2 stage antigen and at least one adult stage antigen.

1 106. (New) The method of claim 103, wherein said antigen is ASP-1, ASP-2, MTP-1, 103
2 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

1 107. (New) The method of claim 103, wherein said antigen is selected from the group consisting
2 of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology
3 therewith. .

1 108. (New) The method of claim 103, wherein a species of said hookworm is selected from the
2 group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and
3 *Ancylostoma duodenale*.

1 109. (New) The method of claim 103, further comprising the step of chemically treating a
2 hookworm- infected patient prior to said step of administering.

1 110. (New) A method of reducing blood loss in a patient infected with hookworm, comprising
2 the step of
3 administering to said patient an effective amount of a composition comprising
4 a recombinant or synthetic antigen derived from hookworm, and
5 a pharmacologically acceptable carrier.

1 111. (New) The method of claim 110 wherein said composition includes
2 a cocktail of recombinant or synthetic antigens derived from hookworm, and,
3 a pharmacologically acceptable carrier.

1 112. (New) The method of claim 110, wherein said composition comprises at least one larval
2 stage antigen and at least one adult stage antigen.

1 113. (New) The method of claim 110, wherein said antigen is ASP-1, ASP-2, MTP-1, 103
2 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

1 114. (New) The method of claim 110, wherein said antigen is selected from the group consisting
2 of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology
3 therewith.

1 115. (New) The method of claim 110, wherein a species of said hookworm is selected from the
2 group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and
3 *Ancylostoma duodenale*.

1 116. (New) The method of claim 110, further comprising the step of chemically treating a
2 hookworm- infected patient prior to said step of administering.

1 117. (New) A method of reducing hookworm size, or quantitative egg count or hookworm
2 burden in a patient infected with hookworm, comprising the step of
3 administering to said mammal an effective amount of a composition comprising
4 a recombinant or synthetic antigen derived from hookworm, and
5 a pharmacologically acceptable carrier.

1 118. (New) The method of claim 117 wherein said composition includes
2 a cocktail of recombinant or synthetic antigens derived from hookworm, and,
3 a pharmacologically acceptable carrier.

1 119. (New) The method of claim 117, wherein said composition comprises at least one larval
2 stage antigen and at least one adult stage antigen.

1 120. (New) The method of claim 117, wherein said antigen is ASP-1, ASP-2, MTP-1, 103, 16,
2 GST, or an antigen having at least 80% homology therewith.

1 121. (New) The method of claim 117, wherein said antigen is selected from the group consisting
2 of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology
3 therewith. .

1 122. (New) The method of claim 117, wherein a species of said hookworm is selected from the
2 group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and
3 *Ancylostoma duodenale*.

1 123. (New) The method of claim 117, further comprising the step of chemically treating a
2 hookworm- infected patient prior to said step of administering.

1 124. (New) A method of decreasing L3 migration across skin of a mammal, comprising the step
2 of
3 administering to said mammal an effective amount of a composition comprising
4 a recombinant or synthetic antigen derived from hookworm, and
5 a pharmacologically acceptable carrier.

1 125. (New) The method of claim 124 wherein said composition includes
2 a cocktail of recombinant or synthetic antigens derived from hookworm, and,
3 a pharmacologically acceptable carrier.

1 126. (New) The method of claim 124, wherein said composition comprises at least one larval
2 stage antigen and at least one adult stage antigen.

1 127. (New) The method of claim 124, wherein said antigen is ASP-1, ASP-2, MTP-1, 103
2 (SAA), 16, GST, or an antigen having at least 80% homology therewith.

1 128. (New) The method of claim 124, wherein said antigen is selected from the group consisting
2 of GST, CP-2, APR-1, APR-2, MEP-1, TMP, or an antigen having at least 80% homology
3 therewith.

1 129. (New) The method of claim 124, wherein a species of said hookworm is selected from the
2 group consisting of *Necator americanus*, *Ancylostoma caninum*, *Ancylostoma ceylanicum*, and
3 *Ancylostoma duodenale*.

1 130. (New) The method of claim 124, further comprising the step of chemically treating a
2 hookworm- infected patient prior to said step of administering.

1 131. (New) A nucleotide sequence represented by SEQ ID NO: 76.

1 132. (New) An amino acid sequence represented by SEQ ID NO: 77.